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(54) BIOLOGICAL DISPOSAL OF WASTE WATER CONTAINING NITROGEN COMPOUND, SULFUR COMPOUND AND NITROGEN-SULFUR COMPOUND

(57)Abstract:

PURPOSE: To facilitate the denitrification and COD-reduction of waste water containing nitrogen compounds, sulfur compound and nitroge-sulfur compounds with high efficiency, by biologically disposing the waste water at pH 3 or lower, and then under a neutral aerobic condition.

CONSTITUTION: Waste water containing nitrogen compounds, sulfur compounds and nitrogen-sulfur compounds is biologically disposed under an aerobic condition of pH 3 or lower using sulfur and ferric sulfate as main nitriments, to decompose the nitroge-sulfur compounds to the state of hydroxylamine and to decompose the sulfur compounds.

Thereafter, the waste water is disposed at a neutral pH level under an aerobic condition, to biologically nitrify and decomposes the generated hydroxyl- amine to nitrous and nitric nitrogens. The waste water is further disposed biologically under an anaerobic condition containing sulfur as a base, to decompose the nitrous and nitric nitrogens and the unreacted sulfur compounds.

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